

IN THE CLAIMS:

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C1 1. (Currently Amended) A readout controlling apparatus for controlling reading conditions while reading data from a recording medium, comprising:

an error correcting means for correcting errors in said read data;

an error rate calculating means for calculating an error rate of said errors in said read data; and

a control means for dynamically controlling and adjusting an amount of light from a laser diode used in reading said data, or a frequency of a signal superimposed on a signal applied to the laser diode or an amplitude of the signal superimposed on the signal applied to the laser diode, based on the calculated error rate in order to reduce the error rate wherein the adjustment occurs while reading user data from the disc in response to the bit error rate exceeding a predetermined level.

2. (Previously Amended) A readout controlling apparatus as set forth in claim 1, wherein:

said data is coded in units of code blocks; and

said error correcting means corrects errors in said code blocks;

said error rate calculating means calculates said error rate by either determining a number of bytes of data where said error correction was correctly carried out and a number of bytes of data wherein said error correction was not correctly carried out, or a number of code blocks wherein said error correction was correctly carried out, and a number of blocks wherein said error correction was not correctly carried out.

3. (Previously Amended) A readout controlling apparatus as set forth in claim 2,
wherein

said error rate calculating means calculates said error rate by using either cumulative addition of the number of bytes of data wherein said error correction was correctly carried out, and the number of bytes of data wherein said error correction was not correctly carried out, or the number of code blocks wherein said error correction was correctly carried out, and the number of blocks wherein said error correction was not correctly carried out for at least one code block.

Claim 4 (Previously canceled).

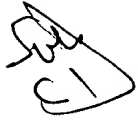
5. (Previously Amended) A readout controlling apparatus as set forth in claim 2,
wherein:

said data comprises information arranged in rows and columns, and further wherein an inner code parity is determined for the rows, and an outer code parity is determined for the columns and

said error correcting means performs inner code error correction using said inner code parity and outer code error correction using said outer code parity.


6. (Previously Amended) A readout controlling apparatus as set forth in claim 5,
further comprising:

a memory means for storing the results of cumulative addition of said inner code error corrections and

 a memory means for storing the results of cumulative addition of said outer code error corrections.

7. (Previously Amended) A readout controlling apparatus as set forth in claim 6, wherein said error rate calculating means reads the cumulative addition values stored in the memory means.

Claims 8 and 9 (previously canceled).

 Claims 10 – 12 (currently canceled).

Claim 13 (previously canceled).

Claims 14-16 (currently canceled).

Claims 17 and 18 (previously canceled).

19. (Currently Amended) A recorder for recording data on a storage medium, comprising:

a reading means for reading recorded data;

an error correcting means for correcting errors in data read by the reading means;

an error rate calculating means for calculating an error rate; and

a control means for dynamically controlling and adjusting one or more of the following recording characteristics: ~~an amount of light generated from a laser diode used during recording;~~ a frequency of a signal superimposed on a signal applied to the laser diode;

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~~and amplitude of the signal superimposed on the signal applied to laser diode; a focus of light used in recording; RF signal characteristics; an inclination of an optical recording medium and/or a speed of said recording medium wherein the adjustment occurs while reading user data from the disc in response to the bit error rate exceeding a predetermined value.~~

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20. (Currently Amended) A readout controlling method for controlling reading conditions while reading data from a recording medium comprising the steps of:

- applying error correction to data read from the recording medium;
- calculating an error rate of said error correction step; and
- dynamically controlling and adjusting a gain of a photodiode employed for reading data from the recording medium so that said error rate becomes small wherein the adjustment occurs while reading user data from the disc in response to the bit error rate exceeding a predetermined value.

Claims 21-23 (previously canceled).

24. (Currently Amended) A method for controlling reading conditions while reading data from a recording medium comprising the steps of:

- applying error correction to data read from the recording medium;
- calculating an error rate of said error correction step; and
- dynamically controlling and adjusting filter characteristics of a filter employed for reading data from the recording medium so that said error rate becomes small wherein the adjustment occurs while reading user data from the disc in response to the bit error rate exceeding a predetermined value.

25. (Currently Amended) A method for controlling reading conditions while reading data from a recording medium comprising the steps of:

applying error correction to data read from the recording medium;

calculating an error rate of said error correction step; and

dynamically controlling and adjusting RF signal characteristics of a signal used for reading data from the recording medium so that said error rate becomes small wherein the adjustment occurs while reading user data from the disc in response to the bit error rate exceeding a predetermined value.

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26. (Currently Amended) A method for controlling reading conditions while reading data from a recording medium comprising the steps of:

applying error correction to data read from the recording medium;

calculating an error rate of said error correction step; and

dynamically controlling and adjusting the inclination of a disk storage member so that said error rate becomes small wherein the adjustment occurs while reading user data from the disc in response to the bit error rate exceeding a predetermined value.

27. (Currently Amended) A method for controlling reading conditions while reading data from a recording medium comprising the steps of:

applying error correction to data read from the recording medium;

calculating an error rate of said error correction step; and

dynamically controlling and adjusting the relative speed of the recording medium so that said error rate becomes small wherein the adjustment occurs while reading user data from the disc in response to the bit error rate exceeding a predetermined value.